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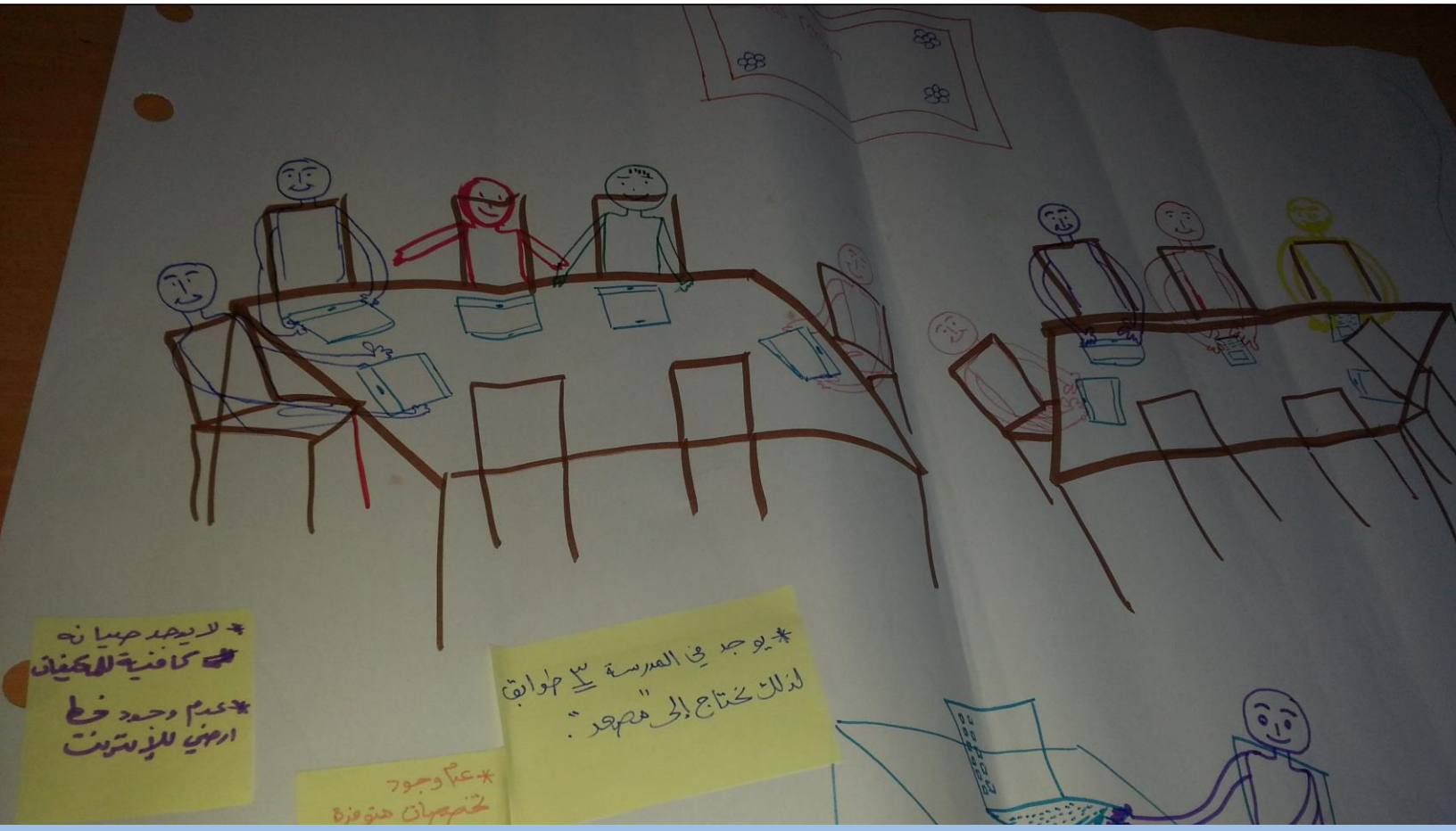

USAID/JORDAN SCHOOL CONSTRUCTION STAKEHOLDER
ASSESSMENT REPORT

April 2015

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USAID/JORDAN SCHOOL CONSTRUCTION STAKEHOLDER ASSESSMENT REPORT

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ACRONYMS

A/E	Architectural and Engineering
ASEZA	Aqaba Special Economic Zone Authority
EDY	Basic Education and Youth
EU	European Union
KFW	German Development Bank
MESP	Monitoring and Evaluation Support Project
MoE	Ministry of Education
MPWH	Ministry of Public Works and Housing
NGOs	Non-governmental Organizations
SOW	Statement of Work
USAID	United States Agency for International Development

PREFACE

The purpose of the School Construction Stakeholder Assessment was to elicit input from a range of stakeholders regarding their perceived roles in each process of school construction, challenges they encounter during each phase, and their recommendations for mitigating challenges and shortcomings of school construction activities.

The findings and recommendations documented in this report have not been filtered or analyzed; rather, they are the collection of comments and observations voiced by workshop participants and interviewees. This stakeholder assessment was not intended to validate or verify stakeholder perceptions of who is responsible for various processes, how processes and procedures function, and what is or is not currently being done. As such, some findings and recommendations represent the views of stakeholders who may not have a complete understanding of the roles and responsibilities of other stakeholders, and the processes, procedures and activities that are currently operating and planned.

Stakeholders who participated in the workshops and in the interviews are representatives from the Ministry of Education (MOE) (central, field, and school levels), Ministry of Public Works and Housing (MPWH), Architecture and Engineering (A/E) firms, construction contractors, local engineering and construction associations, local community members, utilities companies, civil defense and municipalities.

The assessment considered the school construction process in general and not specifically for schools constructed by USAID or donors though, in this report, some specific points regarding the USAID program are made.

INTRODUCTION

PURPOSE

USAID/Jordan requested the services of the Monitoring and Evaluation Support Project (MESP) to assess the public school construction process in Jordan to enable the Mission to better support capacity building among partners involved in school construction with the ultimate objective of improving the efficiency of implementation, utilization, and the quality of school construction activities. The Statement of Work for the assessment is contained in Annex 1.

BACKGROUND

Over the past 12 years, substantial effort has been made to improve systems and outcomes under the public school system. This has entailed activities to revise policies and improve early childhood education, professional development, and school infrastructure. However, most of the interventions related to the school infrastructure have focused on outputs rather than outcomes. To this end, indicators have primarily measured the number of schools constructed and expanded rather than enhancing the efficiency of the entire process and hence, the quality of infrastructure polices and projects.

In 2006, USAID launched the Jordan School Construction and Expansion Project with a budget that reached $199 million. The project target was to construct 28 new schools that respond to the educational reforms vision, and to increase access to enrollment through expanding an additional 100 Ministry of Education (MoE) schools. Throughout the project implementation, it became apparent that a number of challenges significantly led to decreasing the efficiency of project implementation and quality, and thus limited the intended outcomes. In order to identify the root causes of the problem, the assessment was designed to examine the entire process consisting of seven phases:

- Phase 1: Planning
- Phase 2: Design
- Phase 3: Tendering
- Phase 4: Supervision
- Phase 5: Closeout and Acceptance
- Phase 6: Operation and Utilization
- Phase 7: Maintenance

METHODOLOGY

Based on the construction phases identified, the assessment was designed to elicit input from stakeholders regarding their roles in the process of school construction, challenges they encounter during each phase, and recommendations for mitigating challenges and shortcomings of school construction activities.

Key Informant Interviews:

The assessment consisted of in-depth interviews with key staff from both MoE and Ministry of Public Works and Housing (MPWH) in Amman, and through stakeholder workshops in Amman and Aqaba. Aqaba was selected to solicit feedback from the directorates and because it has been a major focus of USAID's first school construction project, thus allowing for a better understanding of the later phases of school construction, namely operation, utilization and maintenance.

Key stakeholders were identified by USAID, resulting in in-depth interviews with six people from both the MoE and MPWH. Each interview was conducted in Arabic, lasted approximately two hours, and was attended by an interviewer from MESP and a representative from USAID.

Focus Group Discussions:

Two six-hour workshops, one in Amman and one in Aqaba, were conducted to gain input from a broader range of stakeholders identified by USAID. The workshops included a plenary session with all attendees and small working group discussions comprised of people from the same entity, or those who work together closely. The purpose of these small group discussions was to provide a forum for people to freely discuss challenges and brainstorm recommendations. This methodology, according to the participants, proved to be a meaningful way for them to voice their concerns and reflect their opinions clearly and transparently.

The workshops were attended by 88 representatives from the following stakeholders:

- Ministry of Education (Directorate and Central Level)
- Ministry of Public Works and Housing (Central Level)
- Civil Defense Department, Utility Companies and Municipalities
- Donors and NGOs
- Construction Firms
- Architecture/Engineering Firms
- Engineers and Construction Associations
- School Staff (Principals, Teachers and Students)
- Parents and Community Members

Representatives from schools and community were recruited for the Aqaba workshop from a list of schools in two directorates in which USAID had conducted school construction activities. The directorates identified participants from four schools, one boys' school and three girls' schools.

A full list of key informants and workshop participants is contained in Annex III.

The assessment fieldwork / data collection was conducted from February 10 to March 22, 2015.

Analysis:

Findings from the interviews and workshops identified five thematic areas:

Theme 1: Ministry of Education (MoE) Capacity
Theme 2: Ministry of Public Works and Housing (MPWH) Capacity
Theme 3: Construction and Architectural/Engineering Firms (A/E) Capacity
Theme 4: Processes and Procedures
Theme 5: Collaboration among Stakeholders

Under each theme, the challenges were grouped by each of the seven phases of construction.

LIMITATIONS

The list of stakeholders identified by USAID did not include some key stakeholders. These other stakeholders include the Audit Bureau (given their involvement in the tendering process), the Department

of Statistics (a major source of data on population that could enrich the planning phase), and the Lands and Areas Department (involved in land ownership and usage).
An additional limitation may be the purely qualitative nature of the assessment that reflects only perceptions of the small number of participants in USAID funded schools specifically selected by directorates for participation.

FINDINGS

The findings of the USAID/Jordan School Construction Stakeholder Assessment are organized as follows:
Challenges as stated by the stakeholders listed by themes and phases; and
Stakeholders' recommendations within each theme.

Findings are presented to reflect as accurately as possible the perspectives of stakeholders. Recommendations for each thematic area represent suggestions made by stakeholders.[1]

A Matrix of stakeholders' involvement in each phase is contained in Annex IV.

THEME 1: MINISTRY OF EDUCATION CAPACITY

Challenges:

Planning Phase

The planning phase is the prime responsibility of the Ministry of Education (MoE). It receives funding from multiple donors, assesses the needs for school capacity and buildings, and determines physical requirements for educational facilities. According to some stakeholders, MoE responsibility in this phase should not be limited to planning but should include location readiness: securing permits and licensing, identifying land borders, and solving issues prior to proceeding to the next level. Most stakeholders reported that MoE planning and management capacity is limited and non-participatory, resulting in a lack of strategic, long-term plans, weak management of the multiple funding sources and duplication of work, and poor selection of school locations. Most stakeholders also mentioned the lack of a database or system that provides up-to-date information on demographics and school populations, status of construction projects, and projected needs, resulting in flaws in planning, particularly in duplication of effort. Stakeholders also commented that planning decisions are sometimes based on favoritism and factors beyond needs for educational facilities.

Some stakeholders said that MoE frequently does not have information necessary for good planning. For example, the engineering/construction associations said that soil testing[2] is not available when needed. The Aqaba Special Economic Zone Authority (ASEZA) reported that social studies and traffic flow studies are not always available during the planning phase. Architecture and engineering firms stated that

[1] The assessment was intended to reflect the concerns and interests as voiced by stakeholders without analysis by the assessment team.
[2] *USAID response: This is usually conducted by Architecture/Engineering firms during the design stage*.

"As-Built" diagrams that show wiring and plumbing are not available when needed, particularly for older schools.

The duration of planning was an issue to MoE, who noted that the long duration of the planning renders original plans irrelevant by the time of implementation. The MoE highlighted changes in demographic characteristics at the local level that affected relevance of plans. The situation has been exacerbated by the influx of refugees, placing additional demands on school services. Another issue mentioned by some stakeholders is the continuous change of plans that cause delays in the implementation and increase costs.

In regards to finding locations for schools, the MoE mentioned that land parcels in highly populated urban areas such as Amman and Zarqa are frequently unavailable and if they are, the price is very high. The MPWH highlighted the high cost incurred when fixing/preparing locations that are not ready, and the significant time needed to solve land issues, particularly those owed by multiple parties. Local community members, parents, and school staff feel that the selection of school locations is poor and is not proportional to real needs. Stakeholders indicated that this issue might be the result of pressure imposed by influential people who cause irrational/unjust distribution of schools between governorates. Utilities and service delivery companies similarly voiced dissatisfaction with the selection of school locations.

Design Phase

During this phase the MoE is responsible for reviewing the compliance of preliminary designs with the planning needs and for developing the school buildings design guidelines. The MoE delegates MPWH to manage the design, construction or expansion of the schools. The major challenge mentioned in relation to the MoE capacity is that they are sometimes unable to secure current property documentation such as the registration, which according to MPWH, results in delays in the design phase.

According to the MoE, each donor is using specific school building guidelines and this disturbs the follow up process for the MoE.

Tendering Phase

The MoE role is secondary in this phase. They sometimes participate in studying the technical proposals for the construction firms and give input when necessary.

Supervision Phase

N/A

Closeout and Acceptance Phase

According to MPWH, the MoE has an important role in receiving the completed schools (in conjunction with the taking-over committee), yet this step is not considered seriously. Although MoE staff determine whether the educational requirements of the facility are met or not, MoE sometimes starts using the schools prior to the completion of all punch list items' construction work, which can result in damage to the property and problems for contractors attempting to finish the work.

School staff mentioned that the hand-over process does not consider the start of the semester, resulting in schools needing to operate prior to being fully furnished.

Operation and Utilization Phase

According to the MoE, newly constructed/expanded schools attract more students in numbers beyond the schools' capacity because of their high infrastructure standards and facilities. Architecture, engineering, and construction firms claim that school staff and students are not trained on proper usage of school

facilities, particularly in facilities with modern fixtures and systems that the users and those responsible for its maintenance are not familiar with. Furthermore, students think that there could be better utilization of spaces inside schools.

School staff and parents report delays in receiving the full equipment needed to operate certain facilities such as laboratories. The issue was also raised by MPWH and associations, parents, and teachers.

Maintenance Phase

Stakeholders point to the core issue of school staff and students not using the facilities responsibly. While stakeholders believe that MoE and schools have responsibility for maintaining schools, the MoE directorates, construction firms, and associations point to a lack of a technical specialists responsible for maintenance services. This was confirmed by MPWH, municipalities, and utility companies, who stated that the MoE (at the central and directorate levels) is not fulfilling its maintenance responsibilities. Furthermore, the MPWH states that the "Construction Guarantee" term is not carefully understood by stakeholders, resulting in a significant burden from requests for maintenance that are irrelevant and not the responsibility of MPWH.

Recommendations

For MOE:

1. Establish a database/management information system with current information on demographics, school population, and status of construction for sound decision-making that avoids duplication.
2. Involve the planning department of the MoE in the entire process of school construction, not only in the planning phase.
3. Improve the planning to better identify school construction/expansion needs and to ensure that schools are ready at the start of the academic year. This includes enhancing the capacities of the MoE personnel at the local and field levels, and including maintenance and sustainability in the planning process.
4. Build the budgeting capacity to allocate costs throughout construction phases, ensuring sufficient funds for operations and maintenance.
5. Ensure participatory planning wherein MoE directorates have a voice in directing construction activities to areas with real needs. This will require empowering directorates to make decisions on technical and financial issues pertaining to projects in their respective areas.
6. Ensure that schools' educational facility requirements are clear among all parties involved in the implementation. This early communication at the planning phase will have an impact on implementation quality.
7. Build the staff capacity to understand and undertake its responsibility in settling land ownership and rights issues. MoE should give MPWH and A/E firms documentation of ownership prior to implementation or at provide timely responses on these issues.
8. Consider factors such as accessibility by roads and availability of basic services prior to location selection.
9. Make timelier decisions to initiate school construction after assessments and plans are completed to ensure validity of plans, particularly given the rapidly changing demographics and population. If this is not possible, make sure to update the relevant information and assessments as needed before start of construction.
10. Build the capacity of school personnel in basic maintenance (including preventive maintenance) in order to avoid repair costs and costs resulting from small problems turning into larger ones.
11. Raise awareness and build capacity of school administrators to engage students, the community, and the private sector to feel ownership of and responsibility for protecting and maintaining schools. This could be accomplished by introducing topics on school responsibility in curricula

and through implementing incentives or a reward system. Such programs could involve industrial schools, VTCs and the National Company for Training and Employment.

12. Train school principals, teachers and students on proper usage of school facilities. Extra training should be provided for donor/USAID funded schools.
13. Involve the school and community in the design phase to ensure quality of designs by advising MPWH on technical issues regarding requirements for educational facilities.
14. Enhance the number and capacities of MoE field engineers, accompanied by an incentive system.
15. Play a larger role throughout the implementation phases, including supervision of construction.
16. Standardize the furniture specifications and build warehouses for furniture inventories, thus allowing MOE to furnish schools immediately upon receipt of the facility and expediting identification of construction and maintenance needs under warranty.
    USAID response: This is not feasible for the MOE. Under USAID contracts, we request that the furniture vendor store the furniture (in pieces) until the school is ready. They can then assemble the pieces and deliver the furniture immediately when the school is officially accepted.
17. Allocate budget for school maintenance beyond the warranty period to ensure the schools are maintained properly.
18. Communicate priority levels for maintenance to MPWH to direct the contractor to fix deficiencies found during the warranty period, thus to ensure urgent situations are addressed first.
19. Build capacity of MoE directorates in school maintenance and adopt a preventive maintenance approach.
20. Obtain required construction licenses from Greater Amman Municipality prior to the bidding stage of the project.
    USAID response: USAID requests that the MOE obtain licenses prior to bidding but this is not standard across MOE schools.
21. Provide the contractor with the design drawings approved by the Civil Defense Department.
    USAID response: USAID requires that the A/E firms have all drawings approved by the Civil Defense before construction.
22. Conduct studies on population and demographics to determine locations for school construction.
23. Adhere to the initial requirements for utilization of facilities, limiting school capacity to 10 percent above original requirements.
    USAID response: The buildings are designed for a specific number of students. Even 10 percent above the original specifications will significantly decrease the lifespan, utility, and learning environment for the students. USAID requires that the MOE hold the number of students and utilization of facilities to the negotiated maximum number of students per class.

THEME 2: MINISTRY OF PUBLIC WORKS AND HOUSING CAPACITY

Challenges:

Planning Phase

According to the interviews conducted with the MPWH staff, the Ministry is not involved in the planning phase; interviewees perceived planning as the "core business" of MoE.

Design Phase

MPWH plays a major role in this phase, acknowledged by MPWH staff who were interviewed. The main challenges in this phase result from a lack of site visits conducted by either MPWH or A/E firms, which hinders producing good quality designs. The Studies Department at MPWH perceived site visits as the responsibility of A/E firms, and mentioned that site visits are an essential part of the design phase through

which the Ministry identifies land obstacles and avoids potential complications that could hinder the progress of the project implementation.

Tendering Phase

The Tendering phase is the process of producing requests for proposals, reviewing and approving proposals. Responsibility for this phase lies primarily with the Tendering Department, an independent department at the MPWH.

The main challenge in this phase, as mentioned by MPWH, is the lack of an annual plan that illustrates procurement needs for the entire year. In their opinion, such a plan would provide a framework to guide them in their tasks and duties throughout the year and would make them more prepared.

Other stakeholders mentioned that design documents are often preliminary3 and change over the course of the project. In some cases, governmental requirements may not be included or mentioned in the tendering documents, thus affecting the flow and timely implementation of the project.

Moreover, construction firms stated that MPWH requirements concerning the minimum qualifications required for firms participating in tendering are not in-line with proposed project values, thus affecting the quality at all levels.

Supervision Phase

Given the limited capacity of MPWH in terms of human resources, vehicles and time, the Ministry is unable to follow up in a timely manner with engineering firms throughout the construction and handover phases. This has implications on quality, as mentioned by staff at the MPWH.

Closeout and Acceptance Phase

Some stakeholders characterize this phase as one of significant delays in handover of schools caused by MPWH. As mentioned previously, delays are mainly due to the high volume of projects that have to be managed by limited staff with limited capacity. Stakeholders also pointed to delays by the Ministry in forming Receiving Committees. These committees are an important part of the closeout and acceptance phase that allows stakeholders to participate and agree on schools' readiness. School staff perceive these delays as negligence on the part of MPWH. Moreover, engineering firms mentioned that in some cases additional work is requested to schools that are near completion; they believe this is due to lack of proper coordination by the Ministry. The Construction Association complained about delays in releasing their funds in escrow and certificates of acceptance due to bureaucratic procedures at the Ministry.

In addition, MoE and school staff mentioned that the MPWH often fail to provide "As-Built" designs that are essential to detect design gaps, and to design expansion plans for individual schools.

Operation and Utilization Phase

N/A

Maintenance Phase

During the construction warranty period, maintenance issues are communicated to the contractor by MPWH. Most stakeholders complained that the current one-year warranty provided by contractors is not sufficient.

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[3] *USAID response: All designs provided are final. However, some design details may change in case of unforeseen conditions.*

Recommendations:

For MPWH:

1. Enhance the capacities of the MPWH staff on technical requirements for educational facilities and modern design.
2. Require longer periods for contractor warranties.
3. Conduct site visits prior to delegating work to the A/E firms.
4. Ensure a clear procedure to provide schools with complete documentation, particularly as-built drawings.
5. Actively review and comment on the designs provided by A/E firms.
6. Accelerate the bidding and the tendering process.
7. Projects should be awarded to firms that are the most technically qualified rather than the least expensive. Contractors who do not perform well should be prohibited from receiving subsequent contracts.
8. Create a procurement plan that includes the number and types of tenders planned for the year, sources of funding, and the timeframe indicating critical times for completion and handover.
9. MPWH should not issue tenders until all licenses and permits are secured. Licenses and permits should be included as part of the tender documents.
10. Limit retendering unless necessary, and only after approval from the donor or funding entity.
    USAID response: This is a requirement for all USAID funded schools.
11. Ensure that tender documents include clear instructions regarding tax and custom exemption procedures.
12. Adhere to regulations specifying the category of firms invited to bid.
    USAID response: USAID may have additional prequalification requirements.
13. Ensure that tender documents clearly state conditions of the contracts, and should enforce regulations and penalties in cases of non-compliance.
14. Consider requiring bidders provide information on the key staff who will be supporting the project.
15. Conduct awareness workshops for contractors to introduce the project and the design approach, and to build their capacity in using renewable energy and green building approaches.
16. Ensure that contractors apply and adhere to Jordanian building codes.
    USAID response: This is accomplished in USAID funded schools through a separate construction supervision contract.
17. Ensure that warranties and maintenance contracts specify a standard of quality.
    USAID response: This is a requirement for all USAID funded schools.
18. Instruct designers to connect electricity and sewage systems. The design drawings should include all details related to these systems and their connections.
    USAID response: This is already a requirement for all USAID funded schools.

THEME 3: CONSTRUCTION AND ARCHITECTURAL/ ENGINEERING FIRM CAPACITY

Construction and A/E firms are the actual implementers of construction projects. Their involvement begins during the design phase and continues through the tendering, supervision and closeout phases. Hence, their capacity to deliver high quality products in a timely manner is viewed by stakeholders as critical.

Challenges:

Planning Phase

N/A

Design Phase

MPWH raised the issue of the poor quality of the designs submitted by A/E firms, and ASEZA cited A/E firms' lack of knowledge regarding general safety requirements, climate considerations, parking spaces, waiting areas, eating and food service areas, and waste disposal as a concern for poor designs.

MPWH states that A/E firms' lack of authority over decisions to remove old buildings and rooms to produce better designs hinders their ability to do good work. MPWH expects the A/E firms to provide early assessments of obstacles such as trees and telephone lines; when these assessments are not conducted, implementation is impeded.

Municipalities and utilities are concerned about delays caused by designs that do not meet zoning regulations.

Tendering Phase

All stakeholders voiced discontent with the lengthy tendering process. MPWH attributes the lengthy period to delays in receiving tendering documents from the A/E firms.

Some contractors cite their limited English language reading skills as a challenge, as they struggle to understand contracts written in English.

Supervision Phase

MoE stated that the main challenges in this phase are the poor quality of materials used in construction, and the absence of supervision from A/E firms, both of which affect building maintenance and sustainability.

A/E firms cite the main challenges in this phase as tight budgets and geographical dispersion of schools.

Amman Municipality and ASEZA are not satisfied about the level of commitment of the contractors, evidenced by their not abiding by the original approved designs, and not fulfilling other stakeholder requirements for reasons of neglect and carelessness.

Stakeholders cite a chain of problems due to delays by A/E firms that such as delays in construction, increased costs for construction firms, and schools being handed over after the start of the school year.

Closeout and Acceptance Phase

MoE is sometimes not satisfied with building finishing details and quality. Moreover, the municipalities and utility companies stated that the A/E firms and construction contractors do not comply with approved plans, resulting in design errors.

Operation and Utilization Phase

N/A

Maintenance Phase

In the maintenance phase, stakeholders most affected are the end users and the MoE field directorates, who suffer from the lack of enforcement of contractors' guarantees and maintenance within the free warranty period. When contractors do provide warranty maintenance, they sometimes use low quality materials.

Stakeholders also mentioned problems that occur when spare parts are not provided for repairs, such as fans and electrical fixtures in computer rooms.

Recommendations:

1. Enhance the collaboration between the A/E and construction firm by holding a kick off meeting after award but before commencement of construction to ease addressing problems.
2. Adopt standards for design guidelines; this would avoid misinterpretation and loss of time in understanding design information.
3. Allow improvements in design to be made if problems are identified during the construction process in order to avoid design defects.
4. Contracts for construction should be written so that contractors are not penalized for delays that are beyond their control.
   USAID response: Standard contracts allow for delays that are beyond contractor control. Weather delays in the rainy season or annual exams and holidays are not considered beyond the contractors' control and the contractor is expected to include expected delays in the schedule.
5. Increase the quality and rigor of supervision. MPWH recommends that contracts include a specific lump sum amount for project managers, who will be interviewed by the Ministry at the tendering stage.
6. Take into account the safe engineering design for the emergency doors and exterior stairways, and the proper exploitation of space, in addition to isolating classrooms, adding external toilets facilities and moving the fire extinguisher tanks outside of the buildings to facilitate maintenance.
7. Conduct field visits prior to initiating the design.
8. Design firms should be encouraged to identify and locally purchase specified materials.
   USAID response: This is incorporated in USAID funded schools.
9. Build the capacity of A/E firms on green building and alternative energy.
10. Design specifications should include requirements for waste disposal and pedestrian safety.
    USAID response: Design specifications in USAID funded schools do require waste disposal and pedestrian safety but this is not standardized among all MOE schools.
11. Build capacity of A/E and construction firms to implement projects according to quality standards required by donors.
12. Environmental and aesthetic issues should be considered in the design phase.
    USAID response: This is incorporated in USAID funded schools.
13. Design should consider aeration, lighting, friendly structures for students with special needs, emergency cases, nurseries in girls' schools, class rotation systems, playgrounds, and measures to minimize the potential for vandalism.
    USAID response: Many of these are requirements in USAID funded schools. Emphasis and new ideas on minimalizing vandalism is a good idea.

14. For the expansion projects, A/E firms should ensure that basic service infrastructure (electric, water, sewage) is aligned and connected with existing buildings.
    USAID response: This is incorporated in USAID funded expansions.
15. Ensure that A/E firms adhere to designs (without deviations if not necessary and approved) and ensure better quality.
16. Ensure that A/E firms adhere to start and end dates.
17. A/E firms should conduct monthly visits during warranty periods to perform preventive maintenance.
    USAID response: This may not be feasible for A/E firms but some contractual requirement to follow up during the warranty period is a good idea.

THEME 4: PROCESSES AND PROCEDURES

Challenges:

Planning Phase

One of the major challenges is the lag time between the planning and implementation stage that can take up to four years. Within that time, demographic shifts can render the plans inappropriate.

The vast majority of stakeholders described USAID financing as rigid, with the majority of funding being allocated for school construction with little remaining for operation and maintenance, both of which require substantial resources.

USAID response: According to our agreement with the MOE, USAID pays for school construction and the MOE is responsible for the operation and maintenance. MOE is obliged to maintain, operate and sustain all schools.

Design Phase

According to the MoE, donors (USAID, KFW, EU) differing design guidelines and approaches are extremely challenging for managing the building process. MoE also cites restrictive limitations that donors place on maximum classroom capacity, which as described by MoE, limits flexibility and efficient school utilization.

Tendering Phase

The tendering process is a major contributor to the lengthy timeline for school construction. A significant amount of time is spent in forming committees and evaluating proposals, negatively affecting the starting date of the projects and sometimes increasing the cost. In addition, some donors' particular prerequisites for contracts and bidding lengthens the duration of tendering.

Proposals are typically awarded based on the lowest price with little consideration for quality and qualification, resulting in the selection of incompetent contractors. This challenge was raised by MPWH, municipalities, A/E firms, school staff and community members.

When retendering is conducted, justification for doing so is unclear to construction firms and costs them time and money.

Supervision Phase

Donor projects do not comply with the MPWH protocols, such as allowing time extensions due to weather conditions that impede the work progress. In addition, materials specified by donors such as thermal blocks are difficult to procure in the local market.

The A/E firms are concerned about the project duration, especially when there are minor design modifications that have to be reviewed by a committee, even though the supervising engineer could conduct the review and make the decisions.

Contractor knowledge regarding the procedures for tax exemptions and other processes is very limited, which can result in delays. Contractors cite challenges from bureaucratic procedures for approvals and conflicts arising because the lines of responsibility and authority between the supervision team and MPWH are not clear.

Closeout and Acceptance Phase

The lengthy closeout process causes delays in delivering the finished project. The contractor is required to consult with the A/E firm and the close-out committee, and consider their comments. In addition, the MPWH has lengthy and complicated procedures, including formal letters of approval, which, according to stakeholders, can be finalized only by the Minister.

A/E firms claim that the MPWH extends projects (including those near completion) for unreasonable amounts of time, sometimes up to two years.

School staff prefer the acceptance process to be implemented in phases rather than all at once. However, contractors prefer to deliver projects in one action because the phased approach requires committees to meet several times, thus costing time and effort.

Schools principals are unclear about the handover process; they prefer to have a standard procedure for the school hand-over process.

Operation and Utilization Phase

Although donor-funded schools are designed to high standards, they may not be suitable for the local context. As an example, the MoE field directorate reports that the emergency (fire) doors and stairs facilitate students stealing and leaving when they are not supposed to.

Maintenance Phase

MPWH stated that it is not clear who is responsible for school maintenance. School staff stated that the one-year warranty is not sufficient for maintenance purposes, as in some cases schools started operating toward the end of maintenance period.

MoE uses an on-demand maintenance approach, which requires that schools submit a maintenance request; the response by MoE is not timely and in the cases of critical repair needs, sometimes results in additional damage.

The contractors stated that they are subject to undue delays in release of their escrow funds.

Students expressed preference for a longer involvement by the donor to monitor the utilization of the building and supervise the maintenance.

Recommendations:

1. The MPWH should group school construction projects in order to have multiple schools under one contract. This will increase the value of the contract and restrict competition to top-tier contractors only.
   USAID response: USAID regulations require having a prequalification process to select only qualified contractors.

2. The MoE needs to develop their school planning and procurement systems by working directly with the staff who will be doing these tasks.
3. MoE should ensure only the highest quality staff at donor/USAID-funded schools to maintain their quality.
4. Standardize a workflow process between the MoE and MPWH that includes policies and procedures, such as a clear procedure to provide the school with the "As-Built" design.
5. Establish a high-level committee (with authority) in charge of supervising/facilitating the entire construction process, and develop a comprehensive supervision system for the project.
6. MoE must standardize guidelines for school design and request that all donors follow it.
7. Write contracts so that contractors are not penalized for delays that are beyond their control such as weather, land ownership issues, and obstructions on the property.
   USAID response: Standard contracts allow for delays that are beyond contractor control. Weather delays in the rainy season or annual exams and holidays are not considered beyond the contractors control and the contractor is expected to include expected delays in the schedule.
8. Establish standards for quality and colors of materials, identify three to five sources, distribute these standards among designers, and ensure adherence to them.
9. MPWH should handle the supervision process.
10. Color selection should be made during the design phase and not during the construction phase.
11. Include penalties in contracts for delays.
12. Design and supervision should be performed by the same firm. When supervision is contracted through a firm other than the A/E, the supervision team should include someone from the original A/E team.
13. Supervision contracts should include a clause for amending the supervision fees, if a project is extended beyond its original period.
14. Ensure that all work related to the project is concluded before handing it over (including maintenance manual, variation orders, final bills, as-built drawings), and extend the supervision contract if substantial comments or additional work is required after project closing.
15. Donors/USAID should fund maintenance beyond the construction warranty period and ensure that maintenance adheres to Jordanian codes.
    USAID response: USAID cannot fund multi-year maintenance contracts. This is an area where USAID feels we can work with the MoE to build capacity to maintain all of the newly constructed schools and expansions across Jordan.

THEME 5: COLLABORATION AMONG STAKEHOLDERS

Challenges:

Planning phase

Collaboration among stakeholders is crucial and affects the early stages of school construction. Collaboration begins with obtaining licenses and permits; some stakeholders mentioned that delays occur when MoE does not follow-up on issuing permits. This was emphasized by ASEZA.

Design Phase

Following the planning stage, the design stage also faces difficulties in regards to licensing. MoE mentioned that licensing older buildings for school expansion requires significant time and can result in extra cost and delays. A/E firms mentioned that in many cases tenders are approved before licenses are obtained, which in turn causes delays.

Tendering Phase

N/A

Supervision Phase

MoE cites a major challenge in removing land obstacles, a costly and lengthy process. Obstacles such as trees and archeological remains cause significant delay, as removal requires permits and licenses; some regulations prohibit removal of trees.

According to MPHW and other stakeholders, the lack of communication and the unprofessional relationship between A/E and construction firms is a main challenge faced in the supervision stage. Limited collaboration with service providers for electricity, water and sewage are an additional source of delay.

Closeout and Acceptance Phase

According to MPWH, conflict could arise between A/E and construction firms on the readiness of the constructed school, ultimately delaying hand-over. Construction firms mentioned that they would rather speed up the process, while A/E firms favor delay. The lack of coordination with municipalities and utility companies delays permissions and ultimately, hand-over. According to ASEZA, such delays often necessitate storage for the school furniture and equipment at an extra cost.

Operation and Utilization Phase

Many stakeholders said that a major problem in the operation and utilization phase is extending water, electricity and sanitation services to constructed schools. The electricity company affirms this, stating that its limited participation in the early stages of the construction process result in the electricity requirements remaining undefined until a later stage.

MoE and ASEZA mentioned that enrollment frequently exceeds schools' capacity, particularly when schools are donor/USAID funded. In order to respond, the administration reallocates facilities such as science labs and theaters into classrooms, a decision that is not popular with students.

Stakeholders mentioned design flaws. As an example, ASEZA mentioned the absence of designated loading/unloading spaces for school supplies and equipment.

Construction firms mentioned that teachers and principals are not offered proper training on the use of equipment.

Maintenance Phase

The electricity company stated that its lack of involvement and the limited attention given to such services in the early stages cause problems with maintenance, particularly in insufficient space allocated for electricity.

Many stakeholders cite students' lack of responsibility and ownership of school facilities resulting in misuse and damage. Stakeholders also commented on the low level of cleanliness in the bathrooms and classrooms.

The MoE mentioned the important role of the local community in fundraising for school maintenance and repair, which is currently not as active as it should be. However, maintenance and repair is the primarily the responsibility of the MoE.

Recommendations:

1. Facilitate the cooperation between stakeholders and government to resolve pending issues related to licenses and permits in order to minimize delays.
2. Develop a mechanism for coordination among stakeholders to ensure their participation in the design phase.
3. Facilitate increased coordination between A/E firms and the building sections in the MoE field directorate.
4. Engage the Teachers' Association in the school's construction to ensure compliance to standards.
5. Increase communities' engagement (parents, school staff, and local community) in school construction activities to build a sense of ownership.
6. Encourage participation of students, local community, and the private sector in school maintenance.
7. Enhance collaboration with municipalities and service providers, particularly in the planning phase, to ensure optimum selection of school locations.
8. Require water and electricity companies to be consulted to ensure compliance and endorse the engineering plans.
9. Civil Defense Department, municipalities and other licensing and regulatory agencies should allow flexibility for exceptions and exemptions for school construction.
10. The Office of the Prime Minister should issue instructions to all licensing and regulatory agencies to expedite approvals for school construction projects.
11. Facilitate communications among stakeholders through establishing a committee that includes government agencies such as MPWH, Civil Defense Department, and Greater Amman Municipality to be responsible for addressing impediments that arise during the school construction process.
12. Increase coordination between the concerned authorities and formulate joint committees to follow the progress and take decisions.
13. Facilitate cooperation between the MoE and MPWH for the closeout and acceptance stages and ensure all stakeholders commit to comments and remarks from the receiving committee.

ANNEX I. STATEMENT OF WORK

USAID/Jordan

School Construction Stakeholder Assessment

Draft Statement of Work

January 25, 2015 (revised February 15, 2015)

A. Purpose and Summary

USAID requests MESP services to conduct a series of stakeholder interviews and workshops to enable the USAID/Jordan Mission to better understand how to support capacity building among partners to improve the implementation efficiency and quality of school construction activities. The stakeholder workshops will elicit input from a variety of key stakeholders, including the Ministry of Education (MoE) (central, field, and school levels), Ministry of Public Works and Housing (MPWH) (central and field levels), Civil Defense Department, donors, NGOs, Architecture and Engineering (A/E) firms, construction contractors, local engineering and construction associations, municipalities, utility companies, school personnel, students, parents, and community members.

The purpose of the workshops is to have stakeholders identify/validate challenges and shortcomings of school construction work; identify which stakeholders should be involved in which stages of the process; and recommend approaches and mechanisms to mitigate challenges and shortcomings of school construction activities. The role of MESP is to facilitate stakeholder brainstorming and to compile the stakeholder input from the workshops and interviews. The ultimate objective is to provide information that will guide USAID in designing future activities in school construction.

B. Background

In the past 12 years substantial effort was made to improve systems and outcomes under the public school system. Focus areas included policies, early childhood education, professional development, and school infrastructure. However, most of the interventions related to the school infrastructure were more focused on the outputs – number of constructed or expanded schools – rather than on outcomes – improving the efficiency of planning, implementation and quality of infrastructure polices and projects.

In 2006, USAID launched the Jordan School Construction and Expansion Project with an overall budget that reached $199 million. The project target was to construct 28 new schools that respond to the educational reforms vision, and to increase access to enrollment through expanding another 100 MoE schools. Throughout the project implementation, it became apparent that a number of challenges significantly led to decreasing the efficiency of project implementation and quality, and limiting the intended outcomes. These challenges can be categorized into seven phases: School Planning, Design, Tendering, Construction & Supervision, Acceptance, Operation, and Maintenance.

C. Assessment Design

Areas of Inquiry

The assessment is intended to gather stakeholder input on the seven phases of construction focusing on three specific areas:

1. Validate challenges that have been identified by USAID and add challenges not yet identified by USAID;
2. Identify the points in the school construction process where the various stakeholders should be involved and how; and,
3. Provide recommendations on how the process and quality of construction can be improved and what type of support USAID could provide to facilitate improving the process.

The assessment will be conducted in Amman and Aqaba. It will be divided into two components: in-depth interviews and stakeholder workshops.

Interviews

Interviews will be conducted with high-level Ministry personnel to introduce the assessment, gain buy-in, flesh-out the list of challenges, and request assistance in facilitating attendance by Ministry, Directorate, and local personnel. USAID will determine the individuals to interview and will accompany MESP in conducting the interviews. MESP will lead interviews; USAID staff will attend interviews and take the lead in taking notes and providing them to MESP.

Workshops

Workshops will be conducted with stakeholders in Amman and Aqaba to gather the same type of information as described above. Each workshop will include approximately 40-50 participants. Stakeholders in Amman will include Ministry personnel, architecture/engineering and construction firms and associations, NGOs, and donors, utilities and municipalities. Stakeholders in Aqaba will include directorate-level Ministry personnel, school administrators, teachers, parents, students and community members. Stakeholders in Aqaba will be selected from communities in which schools were constructed/renovated approximately three to five years ago in order to ground findings with the benefit of experience.

The purpose of conducting workshops is to provide a forum for brainstorming with others in similar capacities, while also providing an opportunity for them to hear perspectives of other groups. In so doing, the workshops serve as a first step in a participatory process that could generate interest rather than focus group discussions in which information is simply transferred from participant to facilitator.

In the case that participants attribute challenges to policies and regulations, they will be asked to identify the specific policy or regulation so as to validate the claim.

It is envisioned that the workshops will begin with a plenary to present the purpose followed by a series of break-out sessions in which groups can work through the areas of inquiry listed above and reconvene to report back to the larger group throughout the day. Break-out sessions will be separated according to stakeholder group with a maximum of six people in each group (the maximum recommended for working groups). Groups will be segregated as follows:

1. Ministry of Education (Regional and Central)
2. Ministry of Public Works and Housing
3. Civil Defense Dept., utility company and municipality personnel

4. Donors and NGOs
5. Construction
6. Architecture/engineering firms
7. School personnel
8. Students
9. Parents and community members

USAID will select attendees for the Amman workshop and provide contact information for those attendees. For the Aqaba workshop, USAID will select the schools to be included for the Aqaba workshop; attendees for that workshop – including students, teachers, parents and community members – will then be identified through the school principals. MESP will be responsible for inviting the participants for both workshops.

D. Tasks

1. Work with USAID staff to collaboratively design interview questions and workshop tools.
2. Lead interviews.
3. Coordinate all logistics and procurement relative to workshops and reporting: facilities, note-takers, Arabic/English interpreters, comments box (for comments/suggestions by participants who prefer to share their views with the plenary anonymously), transportation stipends to non-government attendees for Aqaba workshop, travel and transportation for MESP staff.
4. Contact workshop attendees.
5. Edit and translate into Arabic the list of challenges observed by USAID. This document will be provided to interviewees and workshop participants to validate and add to.
6. Facilitate workshop plenary and some break-out sessions.
7. Produce, in English, translated notes, workshop materials/products, and transcription from Arabic to English.
8. Produce final report that is a compilation of interview and workshop data.

E. Deliverables

1. Assessment Methodology Report, workshop design and tools
2. Assessment Report with a maximum of eight pages:
    a. Purpose
    b. Background
    c. Methodology and limitations of data
    d. Findings that consist of a compilation of input from the three areas of inquiry (validated list of challenges and the groups that identified them; design stages and stakeholders that should be involved in each as indicated by each group; and recommendations proposed by each group to overcome challenges and provide support) as well as any specific policies and regulations that were identified as contributing to challenges
    e. Quotations from participants that illustrate Findings
    f. Matrix of stages of design and stakeholders who should be included in each stage as proposed by each stakeholder group
    g. Participating stakeholder contact information
3. Dissemination event with USAID

F. Team Composition

1. *Team Leader:* MESP Technical Specialist, will lead stakeholder interviews, conduct plenary sessions at workshops, lead in the final report production, and serve as the main point of contact for USAID.

2. *Associate Team Leader*: evaluation specialist with local partner Integrated Solutions, will serve as substitute for stakeholder interviews if the need arises, will facilitate workshop break-out sessions, assist in developing data collection tools, and assist in producing the final report.
3. *Facilitators (6 or7 depending on number of sessions):* MESP will provide up to four facilitators from its staff of technical specialists, augmented by three facilitators provided by USAID.
4. *Note-takers (two at each workshop):* note-takers will be hired to write notes in Arabic of what is reported/discussed in plenary sessions (not in break-out sessions).
5. *Interpreters (1):* one interpreter will be hired for each workshop to provide interpretation from Arabic to English for non-Arabic speaking USAID staff members participating in the workshops.

G. Timeline

Feb 10	USAID comments/approval on SOW
Feb 11-23	MESP and USAID collaboratively design tools for interviews and workshops
Feb 12-18	Conduct interviews with key stakeholders in Amman
Feb 25	Amman workshop
Feb 26- Mar 2	Compile interview and workshop findings
Mar 3	Aqaba workshop
Mar 4-10	Compile interview and workshop findings
Mar 11-19	Draft report
Mar 25	Submit draft report to USAID

H. Additional Info Provided by USAID

- Challenges from the Jordan School Construction and Expansion Project (JSP) as identified by USAID

- Outline of the Capacity Building Project goals, stakeholders, and sample proposed activities

ANNEX II. TOOLS

Tool I

USAID/Jordan Schools Construction Stakeholders Assessment

Suggested agenda for the meeting with His Excellency the Minister of Public Works and Housing

Date: Feb 12 at 9:00 am

- **USAID EDY:** Introduction, Assessment objectives and context.
- **MESP:** Assessment methodology.
- MESP Q1: What are the main challenges facing MPWH regarding schools construction?
- MESP Q2: Do current regulations and policies support or interrupt your work? Please give us some examples.
- MESP Q3: What are your suggestions/recommendations for addressing these challengers?
- MESP Q4: How would you describe the role of other stakeholders? Where do you think other stakeholders should be more involved?
- MESP Q5: Are there any ongoing/planned efforts or initiatives to improve MPWH capacity regarding schools construction?
- **USAID EDY:** Support needed and closing.

Tool 2

USAID/Jordan Schools Construction Stakeholders Assessment

دراسة تقييم مراحل بناء وتوسعة المدارس الحكومية (التحديات والتوصيات)

Suggested questions for the meeting with officials from the Ministry of Public Works and Housing, Ministry of Education.

اسئلة مقابلة المسؤولين من وزارة التربية والتعليم ووزارة الاشغال العامة والاسكان.

** Use the SHs/Stages Matrix and the challenges list to guide the below questions*

**استخدم مصفوفة مراحل بناء مدارس حكومية والتحديات لكل مرحلة*

Introduction, Assessment objectives, context and methodology.

مقدمة حول التقييم واهدافه ومنهجية التقييم.

- MESP Q1: Based on the SHs/Stages Matrix, please describe your involvement under each related stage pertaining to schools construction.
- بناءً على مصفوفه الاطراف المعنية/المراحل ، الرجاء شرح ما هو دوركم في كل مرحلة من مراحل بناء المدرسة التي تعنيكم؟

- MESP Q2: What are the main challenges you face under each of these stages?
- ما هي التحديات الرئيسية التي تواجهكم في كل مرحلة من هذه المراحل؟

- MESP Q3: What are your suggestions/recommendations for addressing these challenges?
- ما هي اقتراحاتكم/توصياتكم لمواجهة هذه التحديات؟

- MESP Q4: Do current regulations and policies support or interrupt your work? Please give us some examples.
- هل تعتقد ان الأنظمة والسياسات الحالية تدعم أو تعيق عملكم؟ اعطنا امثلة؟

- MESP Q5: How would you describe the role of other stakeholders? Where do you think other stakeholders should be more involved?
- كيف تصف دور الجهات المعنية الأخرى؟ و اين يجب ان يلعبوا دورا اكبر باعتقادك؟

- MESP Q6: Are there any ongoing/planned efforts or initiatives to improve your Ministry's capacity regarding schools construction?
- هل هناك اي مشاريع/مبادرات حالية او مستقبلية تهدف الى تحسين قدرات الوزارة في عملية بناء المدارس؟

Tool 3

Flip Chart Template

ورقة (1)

اسم المجموعة

المرحلة	دور اساسي	دور ثانوي	لا دور لهم	المرحلة
1. التخطيط				
2. التصميم الهندسي				
3. طرح العطاءات				
4. التنفيذ و الاشراف				
5. انهاء المشروع و استلامه				
6. التشغيل و الاستخدام				
7. الصيانة				

ورقة (2)

المرحلة : التخطيط	
الدور	1. ... 2. ... 3. ...
التحديات	1. ... 2. ... 3. ...

ورقة (3)

المرحلة : التخطيط	
التوصيات	1. ... 2. ... 3. ...

تعاد ورقة 2 و 3 لكل مرحلة

ANNEX III. STAGES OF SCHOOL CONSTRUCTION[4]

STAGES OF SCHOOL CONSTRUCTION

STAKEHOLDERS	Stage 1 Planning	Stage 2 Design	Stage 3 Tendering	Stage 4 Supervision	Stage 5 Close-out/ Acceptance	Stage 6 Operation and Utilization	Stage 7 Maintenance
Ministry of Education	Major role	Major role	Secondary role	Secondary role	Secondary role	Major role	Major role
Ministry of Public Work and Health	Secondary role	Major role	Major role	Major role	Major role	Secondary role	Major role
Utility Companies, Municipality Personnel and Department of Defense	Major role	Major role	Both Major and Secondary roles	Both Major and Secondary roles	Major role	No role	Secondary role
Associations, NGOs and Donors	Secondary role	Secondary role	Secondary role	Secondary role	Major role	Major role	Secondary role
Architectural and Engineering Firms	Major role	Major role	Major role	Major role	Major role	No role	No role
Construction Firms	No role	No role	Major role	Major role:	Secondary Role	Major Role	No Role
Aqaba Special Economic Zone Authority	Major role	Secondary role except for infrastructure services	Secondary role	Secondary role	Secondary role	Secondary role	Secondary role
School Personnel	No role	No role	No role	No role	Secondary role	Major role	Major role
Students	No role	No role	No role	No role	No role	Major role	Secondary role
Parents	No role	No role	No role	No role	No role	Secondary role	Secondary role

[4] These are self-reported – some of the key stakeholders have understated or overstated their role.